

***** QUERY RESULTS *****

=> d his 121

(FILE 'HCAPLUS' ENTERED AT 10:44:21 ON 31 JUL 2009)
 L21 11 S L20 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> d que 121

L5 173 SEA FILE=REGISTRY ABB=ON PLU=ON (CA(L)SR(L)EU(L)MG(L)SI(L)O)/
 ELS
 L6 50 SEA FILE=REGISTRY ABB=ON PLU=ON L5 (L) 6/ELC.SUB
 L7 18854 SEA FILE=REGISTRY ABB=ON PLU=ON 0.1<=CA<=0.4
 L8 9464 SEA FILE=REGISTRY ABB=ON PLU=ON 0<CA<0.1
 L9 26079 SEA FILE=REGISTRY ABB=ON PLU=ON L7 OR L8
 L10 18121 SEA FILE=REGISTRY ABB=ON PLU=ON 0.1<=SR<=0.4
 L11 5618 SEA FILE=REGISTRY ABB=ON PLU=ON 0<EU<0.1
 L12 13 SEA FILE=REGISTRY ABB=ON PLU=ON L6 AND L9
 L13 1 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND L10
 L14 1 SEA FILE=REGISTRY ABB=ON PLU=ON L13 AND L11
 L15 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L14
 L16 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L13
 L17 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 OR L16
 L18 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L19 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L6
 L20 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 OR L18 OR L19
 L21 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND (AY<2003 OR PY<2003
 OR PRY<2003)

=> d 121 1-11 ibib abs hitstr hitind

L21 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 2004:119681 HCAPLUS Full-text

DOCUMENT NUMBER: 140:189703

TITLE: Bivalent metal silicate phosphor and process for its
 production, and a phosphor paste composition and a
 vacuum ultraviolet ray excitation type light-emitting
 device employing such a phosphor

INVENTOR(S): Matsuda, Kouhei; Hisamune, Takayuki

PATENT ASSIGNEE(S): Kasei Optonix, Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 20040027047	A1	20040212	US 2003-391627	20030320 <--
US 6899825	B2	20050531		
JP 2003277749	A	20031002	JP 2002-124997	20020322 <--
JP 4046542	B2	20080213		
JP 2003342564	A	20031203	JP 2002-186899	20020523 <--
JP 4146173	B2	20080903		
JP 2004131677	A	20040430	JP 2002-332900	20021010 <--
JP 2004231930	A	20040819	JP 2003-60646	20030130
PRIORITY APPLN. INFO.:			JP 2002-124997	A 20020322 <--
			JP 2002-186899	A 20020523 <--
			JP 2002-332900	A 20021010 <--

AB Europium-activated bivalent metal silicate phosphors are described which comprises, as matrix crystal, a silicate containing, as constituting metal elements, Ca, Mg and Si and which is activated by Eu, and contains a specific amount of at least one of La, Ba, Sr, Zn, Y, Ce, In, Bi, chlorine, bromine and iodine in the crystalline matrix. Processes for phosphor production, a phosphor paste composition and a vacuum-UV-excitation type light-emitting device employing the phosphors are also discussed.

IT 627810-26-8P 627810-28-0P 657350-10-2P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(europium-doped bivalent metal silicate phosphors, their preparation and

use

in phosphor paste composition and vacuum-UV excitation light-emitting devices)

RN 627810-26-8 HCAPLUS

CN Calcium europium magnesium strontium silicate
(Ca0.97Eu0.02MgSr0.01(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
-----+-----+-----		
O3Si	2	15593-90-5
Ca	0.97	7440-70-2
Eu	0.02	7440-53-1
Sr	0.01	7440-24-6
Mg	1	7439-95-4

RN 627810-28-0 HCAPLUS

CN Calcium europium magnesium strontium silicate (Ca0.88Eu0.02MgSr0.1(SiO3)2)
(CA INDEX NAME)

Component	Ratio	Component Registry Number
-----+-----+-----		
O3Si	2	15593-90-5
Ca	0.88	7440-70-2
Eu	0.02	7440-53-1
Sr	0.1	7440-24-6
Mg	1	7439-95-4

RN 657350-10-2 HCAPLUS

CN Calcium europium magnesium strontium silicate
(Ca0.93Eu0.02MgSr0.05(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
-----+-----+-----		
O3Si	2	15593-90-5
Ca	0.93	7440-70-2
Eu	0.02	7440-53-1
Sr	0.05	7440-24-6
Mg	1	7439-95-4

IC ICM H01J001-62

INCL 313483000

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76

IT 606933-54-4P 606933-55-5P 627810-25-7P 627810-26-8P
 627810-28-0P 627810-29-1P, Calcium europium magnesium zinc
 silicate (Ca_{0.98}Eu_{0.02}Mg_{0.99}Zn_{0.01}(SiO₃)₂) 657350-10-2P
 657350-11-3P 657350-12-4P 657350-13-5P 657350-14-6P
 RL: DEV (Device component use); IMF (Industrial manufacture); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (europium-doped bivalent metal silicate phosphors, their preparation and

use
 in phosphor paste composition and vacuum-UV excitation light-emitting
 devices)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
 (5 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:945575 HCAPLUS Full-text

DOCUMENT NUMBER: 140:10356

TITLE: Divalent metal silicate blue phosphors with good
 vacuum-UV resistance, their paste compositions, and
 vacuum-UV-induced luminescence devices

INVENTOR(S): Matsuda, Kohei; Hisamune, Takayuki

PATENT ASSIGNEE(S): Kasei Optonix, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342564	A	20031203	JP 2002-186899	20020523 <--
JP 4146173	B2	20080903		
US 20040027047	A1	20040212	US 2003-391627	20030320 <--
US 6899825	B2	20050531		
PRIORITY APPLN. INFO.:			JP 2002-124997	A 20020322 <--
			JP 2002-186899	A 20020523 <--
			JP 2002-332900	A 20021010 <--
			JP 2003-60646	A 20030130

AB The invention relates to the phosphors comprising (A) Eu as a dopant, (B)
 silicate crystals that contain Ca, Mg, and Si, and (C) ≥1 element selected
 from Ba, Sr, Zn, Y, Ce, In, and Bi, useful for a light source of a scanner, a
 plasma display panel, etc.

IT 627810-26-8P 627810-27-9P 627810-28-0P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP
 (Preparation); USES (Uses)

(phosphor; divalent metal silicate blue phosphors with good vacuum-UV
 resistance)

RN 627810-26-8 HCAPLUS

CN Calcium europium magnesium strontium silicate
 (Ca_{0.97}Eu_{0.02}MgSr_{0.01}(SiO₃)₂) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.97	7440-70-2
Eu	0.02	7440-53-1

10/559378

Sr		0.01		7440-24-6
Mg		1		7439-95-4

RN 627810-27-9 HCAPLUS
 CN Calcium europium magnesium strontium silicate
 (Ca0.95Eu0.02MgSr0.03(SiO3)2) (CA INDEX NAME)

Component		Ratio		Component
				Registry Number
O3Si		2		15593-90-5
Ca		0.95		7440-70-2
Eu		0.02		7440-53-1
Sr		0.03		7440-24-6
Mg		1		7439-95-4

RN 627810-28-0 HCAPLUS
 CN Calcium europium magnesium strontium silicate (Ca0.88Eu0.02MgSr0.1(SiO3)2)
 (CA INDEX NAME)

Component		Ratio		Component
				Registry Number
O3Si		2		15593-90-5
Ca		0.88		7440-70-2
Eu		0.02		7440-53-1
Sr		0.1		7440-24-6
Mg		1		7439-95-4

IC ICM C09K011-59

ICS C09K011-00; C09K011-08; H01J061-44

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76

IT 627810-25-7P 627810-26-8P 627810-27-9P
 627810-28-0P 627810-29-1P, Calcium europium magnesium zinc
 silicate (Ca0.98Eu0.02Mg0.99Zn0.01(SiO3)2) 627810-30-4P 627810-31-5P
 627810-32-6P 627810-33-7P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP

(Preparation); USES (Uses)

(phosphor; divalent metal silicate blue phosphors with good vacuum-UV resistance)

L21 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:931455 HCAPLUS Full-text

DOCUMENT NUMBER: 140:10725

TITLE: Plasma display unit containing specific blue phosphor
 INVENTOR(S): Kawamura, Hiroyuki; Sugimoto, Kazuhiko; Aoki, Masaki;
 Otani, Mitsuhiro; Setoguchi, Hiroshi; Hibino, Junichi

PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003097767	A1	20031127	WO 2003-JP6047	20030515 <--

W: CN, KR, US

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

JP 2003336048 A 20031128 JP 2002-142659 20020517 <--
 JP 4096619 B2 20080604
 CN 1556843 A 20041222 CN 2003-801060 20030515 <--
 CN 1238466 C 20060125
 EP 1506989 A1 20050216 EP 2003-752903 20030515 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK
 US 20040239247 A1 20041202 US 2004-489326 20040311 <--
 US 7161298 B2 20070109

PRIORITY APPLN. INFO.:

JP 2002-142659 A 20020517 <--
 WO 2003-JP6047 W 20030515

AB A the invention relates to a plasma display unit comprising a blue phosphor constituted of a compound of the formula $\text{Me}_3\text{MgSi}_2\text{O}_8\text{:Eu}$ (wherein Me represents at least one member of calcium (Ca), strontium (Sr) and barium (Ba)) wherein with respect to the europium (Eu) atoms as a constituent thereof, the concentration of bivalent Eu ions is in the range of 45-95% while the concentration of trivalent Eu ions is in the range of 5-55%. A plasma display unit of high luminance and long life whose luminance deterioration in the process of panel production is less can be obtained.

IT 627873-88-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (blue phosphor for plasma display unit)

RN 627873-88-5 HCAPLUS

CN Calcium europium magnesium strontium silicate ($\text{Ca}_{0.25}\text{Eu}_{0.1}\text{MgSr}_{2.45}(\text{SiO}_4)_2$)
 (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
O4Si	2	17181-37-2
Ca	0.25	7440-70-2
Eu	0.1	7440-53-1
Sr	2.45	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-64

ICS C09K011-08; H01J011-02

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 627873-85-2 627873-88-5 627873-89-6 627873-90-9, Calcium europium magnesium silicate ($\text{Ca}_{2.4}\text{Eu}_{0.2}\text{Mg}(\text{SiO}_4)_2$)

RL: TEM (Technical or engineered material use); USES (Uses)
 (blue phosphor for plasma display unit)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:868362 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 139:371582

TITLE: Phosphors having high luminance after plasma exposure and their pastes

INVENTOR(S): Ono, Keiji; Miyazaki, Susumu

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003313549	A	20031106	JP 2002-122050	20020424 <--
PRIORITY APPLN. INFO.:			JP 2002-122050	20020424 <--
AB	The phosphors, useful for vacuum UV-excited light-emitting devices (e.g., plasma display panels, fluorescent lamps), contain first components comprising mM10.nM20.2M3O2 (M1 = Ba and/or Ca, Sr and Ba or Ca; M2 = Mg and/or Zn; M3 = Si and/or Ge; $0.5 \leq m \leq 3.5$; $0.5 \leq n \leq 2.5$) and Eu and/or Mn as activators and second components comprising aluminates.			
IT	406226-89-9 620609-81-6 RL: TEM (Technical or engineered material use); USES (Uses) (phosphors containing two kinds of luminescent substances and showing high luminance after plasma exposure for vacuum UV-excited light-emitting devices)			
RN	406226-89-9 HCAPLUS			
CN	Calcium europium magnesium strontium silicate (Ca0.8-1Eu0-0.1MgSr0-0.1(SiO3)2) (9CI) (CA INDEX NAME)			

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.8 - 1	7440-70-2
Eu	0 - 0.1	7440-53-1
Sr	0 - 0.1	7440-24-6
Mg	1	7439-95-4

RN 620609-81-6 HCAPLUS
 CN Calcium europium magnesium strontium silicate
 (Ca0.92Eu0.03MgSr0.05(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.92	7440-70-2
Eu	0.03	7440-53-1
Sr	0.05	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-08
 ICS C09K011-59; C09K011-64; C09K011-66
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 74
 IT 12254-04-5, Aluminum barium magnesium oxide (Al10BaMgO17) 128124-38-9,
 Aluminum barium europium magnesium oxide (Al5Ba0.45Eu0.05Mg0.5O8.5)
 406226-89-9 620609-81-6 620609-82-7, Aluminum barium europium magnesium oxide (Al10Ba0.7-1Eu0-0.3MgO17)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (phosphors containing two kinds of luminescent substances and showing high luminance after plasma exposure for vacuum UV-excited light-emitting devices)
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L21 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:472866 HCAPLUS Full-text
 DOCUMENT NUMBER: 139:43984
 TITLE: Method for producing silicate phosphor
 INVENTOR(S): Ono, Keiji; Takeda, Takashi; Miyazaki, Susumu
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
 SOURCE: U.S. Pat. Appl. Publ., 4 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030111643	A1	20030619	US 2002-318146	20021213 <--
US 6884367	B2	20050426		
JP 2003183644	A	20030703	JP 2001-385832	20011219 <--
JP 3915504	B2	20070516		
JP 2004002512	A	20040108	JP 2002-158909	20020531 <--
JP 4023222	B2	20071219		
TW 285672	B	20070821	TW 2002-91136169	20021213 <--
EP 1321500	A2	20030625	EP 2002-28107	20021217 <--
EP 1321500	A3	20050727		
EP 1321500	B1	20090225		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1445332	A	20031001	CN 2002-157898	20021217 <--
CN 1315982	C	20070516		

PRIORITY APPLN. INFO.: JP 2001-385832 A 20011219 <--
 JP 2002-158909 A 20020531 <--

AB The object of the present invention is to provide a production method for a silicate phosphor having high brightness. This object is achieved by the method for producing a silicate phosphor comprising a step of calcining a mixture of metal compds., wherein 1 of the metal compds. is Si oxide having BET sp. surface area of $\geq 10 \text{ m}^2/\text{g}$.
 IT 541547-30-2P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (for producing silicate phosphor)
 RN 541547-30-2 HCAPLUS
 CN Calcium europium magnesium strontium silicate ($\text{Ca}_{0.86}\text{Eu}_{0.05}\text{MgSr}_{0.1}(\text{SiO}_3)_2$)
 (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	2	15593-90-5
Ca	0.86	7440-70-2
Eu	0.05	7440-53-1
Sr	0.1	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-00
 INCL 252301400F
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 49
 IT 541547-30-2P
 RL: IMF (Industrial manufacture); PREP (Preparation)

(for producing silicate phosphor)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(9 CITINGS)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:353826 HCAPLUS Full-text
DOCUMENT NUMBER: 138:360191
TITLE: Luminescent device for optical display apparatus
INVENTOR(S): Suzuki, Teruki; Oshiki, Masatoshi; Okazaki, Choichiro
PATENT ASSIGNEE(S): Hitachi Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003132803	A	20030509	JP 2001-331855	20011030 <--
JP 4122752	B2	20080723		
TW 290329	B	20071121	TW 2002-91124800	20021024 <--
CN 1417831	A	20030514	CN 2002-147086	20021029 <--
CN 100405522	C	20080723		
CN 1932930	A	20070321	CN 2006-10141650	20021029 <--
US 20030085853	A1	20030508	US 2002-283140	20021030 <--
US 7138965	B2	20061121		
US 20070018912	A1	20070125	US 2006-526620	20060926 <--
KR 2009056941	A	20090603	KR 2009-33681	20090417 <--
PRIORITY APPLN. INFO.:			JP 2001-331855	A 20011030 <--
			JP 2001-333675	A 20011031 <--
			JP 2001-333681	A 20011031 <--
			CN 2002-147086	A3 20021029 <--
			KR 2002-66323	A3 20021030 <--
			US 2002-283140	A1 20021030 <--

AB The invention relates to a luminescent device for an optical display apparatus, such as plasma displays, and FED, comprising the divalent Eu-activated alkali earth silicate phosphor represented by (Ae)₃-x(Ae')Si₂O₈:Eux [Ae = Sr, Ca, and Ba; Ae' = Mg and Zn; and 0.01 ≤ x ≤ 0.1], providing a blue-emitting phosphor for VUV and low energy electron beam excitations.

IT 130430-65-8

RL: DEV (Device component use); USES (Uses)

(luminescent device for optical display apparatus)

RN 130430-65-8 HCAPLUS

CN Calcium europium magnesium strontium silicate (Ca_{0.1}Eu_{0.03}MgSr_{2.87}(SiO₄)₂)
(CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.1	7440-70-2
Eu	0.03	7440-53-1
Sr	2.87	7440-24-6
Mg	1	7439-95-4

IC ICM H01J011-02

ICS C09K011-08; C09K011-59; C09K011-78; C09K011-79; C09K011-80;

C09K011-81; C09K011-83
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 74
 IT 121797-58-8, Europium magnesium strontium silicate (Eu_{0.03}MgSr_{2.97}(SiO₄)₂)
 130430-65-8 518329-56-1, Europium magnesium strontium silicate
 (Eu_{0.1}MgSr_{2.9}(SiO₄)₂) 519183-31-4, Europium magnesium strontium silicate
 (Eu_{0.01}MgSr_{2.99}(SiO₄)₂) 519183-32-5, Europium magnesium strontium
 silicate (Eu_{0.02}MgSr_{2.98}(SiO₄)₂) 519183-33-6, Europium magnesium
 strontium silicate (Eu_{0.05}MgSr_{2.95}(SiO₄)₂) 519183-34-7 519183-35-8,
 Calcium europium magnesium silicate (Ca_{2.9}Eu_{0.1}Mg(SiO₄)₂) 519183-36-9
 519183-37-0 519183-38-1 519183-39-2 519183-40-5 519183-41-6,
 Barium europium magnesium silicate (Ba_{2.9}Eu_{0.1}Mg(SiO₄)₂) 519183-42-7
 519183-43-8 519183-44-9 519183-45-0 519183-46-1
 RL: DEV (Device component use); USES (Uses)
 (luminescent device for optical display apparatus)
 OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS
 RECORD (24 CITINGS)

L21 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2009 ACS ON STN
 ACCESSION NUMBER: 2002:253046 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:286263
 TITLE: Phosphors for vacuum-UV-excited light-emitting devices
 INVENTOR(S): Toda, Kenji; Sato, Mineo; Ono, Keiji; Miyazaki,
 Susumu; Takeda, Takashi
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
 SOURCE: Eur. Pat. Appl., 6 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1193306	A2	20020403	EP 2001-123144	20010927 <--
EP 1193306	A3	20040102		
EP 1193306	B1	20090513		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002332481	A	20021122	JP 2001-259235	20010829 <--
JP 3985478	B2	20071003		
US 20020038861	A1	20020404	US 2001-960955	20010925 <--
US 6802990	B2	20041012		
TW 228535	B	20050301	TW 2001-90123630	20010925 <--
CN 1345908	A	20020424	CN 2001-137167	20010927 <--
CN 100338170	C	20070919		
CN 101033397	A	20070912	CN 2007-10096613	20010927 <--
KR 760882	B1	20071004	KR 2001-59984	20010927 <--
CN 101200637	A	20080618	CN 2007-10096182	20010927 <--
JP 2007246918	A	20070927	JP 2007-138850	20070525 <--
JP 2007277567	A	20071025	JP 2007-138849	20070525 <--
JP 2007284683	A	20071101	JP 2007-138848	20070525 <--
PRIORITY APPLN. INFO.:				
			JP 2000-299320	A 20000929 <--
			JP 2001-66318	A 20010309 <--
			JP 2001-259235	A3 20010829 <--
			CN 2001-137167	A3 20010927 <--

AB Fluorescent materials for vacuum-UV-excited light-emitting devices are described by the general formula, $M_1M_2M_3O_2$, where M_1 is ≥ 1 metal selected from Ca, Sr and Ba, M_2 is ≥ 1 metal selected from Mg and Zn, M_3 is ≥ 1

element selected from Si and Ge, and m and n satisfy $0.5 \leq m \leq 3.5$ and $0.5 \leq n \leq 2.5$, resp., provided that when $m=n=1$, M1 is either ≥ 2 metals selected from Ca, Sr and Ba, or 1 of Sr and Ba; and ≥ 1 metal selected from Eu and Mn as an activator. Vacuum-UV-excited light-emitting devices employing the phosphors are also discussed.

IT 406226-89-9

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)

RN 406226-89-9 HCAPLUS

CN Calcium europium magnesium strontium silicate
(Ca0.8-1Eu0-0.1MgSr0-0.1(SiO3)2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
=====	=====	=====
O3Si	2	15593-90-5
Ca	0.8 - 1	7440-70-2
Eu	0 - 0.1	7440-53-1
Sr	0 - 0.1	7440-24-6
Mg	1	7439-95-4

IT 406226-83-3P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)

RN 406226-83-3 HCAPLUS

CN Calcium europium magnesium strontium silicate
(Ca0.92Eu0.03MgSr0.48(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
=====	=====	=====
O3Si	2	15593-90-5
Ca	0.92	7440-70-2
Eu	0.03	7440-53-1
Sr	0.48	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-78

ICS C09K011-79; C09K011-66

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76

IT 406226-89-9

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(phosphors for vacuum-UV-excited light-emitting devices with small decrease in luminance after exposure to plasma or to heat treatment)

IT 406226-83-3P 406226-84-4P 406226-85-5P, Barium europium magnesium oxide silicate (Bal.98Eu0.02MgO(SiO3)2) 406226-86-6P

406226-87-7P, Europium strontium zinc oxide silicate (Eu0.02Sr1.98ZnO(SiO3)2) 406226-88-8P, Calcium europium magnesium silicate (Ca0.95Eu0.05Mg(SiO3)2)

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(phosphors for vacuum-UV-excited light-emitting devices with small
decrease in luminance after exposure to plasma or to heat treatment)

OS.CITING REF COUNT: 21 THERE ARE 21 CAPLUS RECORDS THAT CITE THIS
RECORD (45 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:775705 HCAPLUS Full-text

DOCUMENT NUMBER: 128:107916

ORIGINAL REFERENCE NO.: 128:21029a,21032a

TITLE: Synthesis of solid solutions based on the akermanite
and/or hardystnite systems and their fluorescence
properties

AUTHOR(S): Kakitani, Satoru; Ishii, Hiroshi; Yamaguchi, Kazuhiro

CORPORATE SOURCE: Department of Applied Science, Faculty of Science,
Okayama University of Science, Okayama, 701, Japan

SOURCE: Japanese Journal of Applied Physics, Part 1: Regular
Papers, Short Notes & Review Papers (1997),
36(11), 6793-6797

CODEN: JAPNDE; ISSN: 0021-4922

PUBLISHER: Japanese Journal of Applied Physics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors studied the incorporation of Eu into Akermanite and Hardystnite
crystals and the fluorescence properties of the substances and Eu was
incorporated into Akermanite or Hardystnite only when it was co-doped with Na.
This procedure enabled limited substitution of Eu³⁺ for Ca, resulting in the
emission of 600 nm red fluorescence under UV irradiation Eu was, however,
incorporated into Akermanite- or Hardystnite-based solid solns., which were
made by limited substitution of Sr for Ca as a form of Eu²⁺. These substances
exhibited emission of blue-colored fluorescence with a spectrum peak around
500 nm. Also Hardystnite and Sr-Hardystnite (Sr substituted for Ca) formed a
continuous series of solid solution

IT 201229-03-0P 201229-04-1P 201229-05-2P

201229-06-3P 201229-07-4P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(synthesis of solid solns. based on akermanite and/or hardystnite
systems and fluorescence properties)

RN 201229-03-0 HCAPLUS

CN Calcium europium magnesium strontium oxide silicate
(Ca_{0.99}Eu_{0.02}MgSr_{0.20}(SiO₃)₂) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.2	7440-24-6
Mg	1	7439-95-4

RN 201229-04-1 HCAPLUS

CN Calcium europium magnesium strontium oxide silicate
(Ca_{0.99}Eu_{0.02}MgSr_{0.40}(SiO₃)₂) (CA INDEX NAME)

Component	Ratio	Component Registry Number
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Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.4	7440-24-6
Mg	1	7439-95-4

RN 201229-05-2 HCAPLUS

CN Calcium europium magnesium strontium oxide silicate
(Ca0.99Eu0.02MgSr0.99O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.99	7440-24-6
Mg	1	7439-95-4

RN 201229-06-3 HCAPLUS

CN Calcium europium magnesium strontium oxide silicate
(Ca0.99Eu0.02MgSr0.59O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.59	7440-24-6
Mg	1	7439-95-4

RN 201229-07-4 HCAPLUS

CN Calcium europium magnesium strontium oxide silicate
(Ca0.99Eu0.02MgSr0.79O(SiO3)2) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O3Si	2	15593-90-5
Ca	0.99	7440-70-2
Eu	0.02	7440-53-1
Sr	0.79	7440-24-6
Mg	1	7439-95-4

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 75, 78

IT 13573-15-4P, Calcium magnesium silicate (Ca2MgSi2O7) 13842-59-6P,
 Strontium zinc silicate (Sr2ZnSi2O7) 14565-87-8P, Calcium zinc silicate
 (Ca2ZnSi2O7) 201228-88-8P 201228-89-9P 201228-90-2P 201228-91-3P
 201228-92-4P 201228-93-5P 201228-94-6P, Calcium europium oxide
 silicate (Ca2Eu8O2(SiO4)5) 201228-95-7P 201228-96-8P 201228-97-9P
 201228-98-0P, Calcium europium zinc oxide silicate
 (Ca1.98Eu0.02ZnO(SiO3)2) 201228-99-1P, Calcium europium zinc oxide

silicate (Cal.95Eu0.05ZnO(SiO₃)₂) 201229-00-7P 201229-01-8P, Calcium
 europium oxide silicate (CaEu₄O₂(SiO₄)₃) 201229-02-9P
 201229-03-0P 201229-04-1P 201229-05-2P
 201229-06-3P 201229-07-4P 201229-08-5P, Calcium
 strontium zinc oxide silicate (Cal.2Sr0.8ZnO(SiO₃)₂) 201229-09-6P,
 Calcium strontium zinc oxide silicate (Ca_{0.4}Sr_{1.6}ZnO(SiO₃)₂)
 201229-10-9P, Calcium europium zinc oxide silicate
 (Ca_{0.99}Eu_{0.02}ZnO(SiO₃)₂) 201229-11-0P 201229-12-1P 201229-13-2P,
 Europium strontium zinc oxide silicate (Eu_{0.02}Sr_{0.99}ZnO(SiO₃)₂)
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)
 (synthesis of solid solns. based on akermanite and/or hardystnite
 systems and fluorescence properties)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1991:133113 HCAPLUS Full-text

DOCUMENT NUMBER: 114:133113

ORIGINAL REFERENCE NO.: 114:22443a,22446a

TITLE: Cathode-ray tube

INVENTOR(S): Yamamoto, Akira; Suzuki, Teruki; Yamada, Takamichi;
 Matsukyo, Hideji

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02135276	A	19900524	JP 1988-287679	19881116 <--
PRIORITY APPLN. INFO.:			JP 1988-287679	19881116 <--

AB A cathode-ray tube, especially a blue color tube for a projection TV, having a screen load ≥ 0.1 W/cm², comprises a fluorescent screen made from a ZnS:Ag, Al 1st phosphor and a 2nd phosphor having chromaticity coordinated defined by $x \leq 0.2$ and $y \leq 0.2$, an electron-beam luminescence energy efficiency $\geq 15\%$ of the 1st phosphor, and an exponent of the power approx. in luminescent vs. cathode current relation ≥ 0.8 , wherein the weight ratio of the 2nd phosphor to the 1st is 0.4-2.3.

IT 130430-65-8

RL: USES (Uses)

(blue phosphor blend containing, for projection TV tube)

RN 130430-65-8 HCAPLUS

CN Calcium europium magnesium strontium silicate (Ca_{0.1}Eu_{0.03}MgSr_{2.87}(SiO₄)₂)
 (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.1	7440-70-2
Eu	0.03	7440-53-1
Sr	2.87	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-08

ICS C09K011-56; H01J029-20

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 1314-98-3, Zinc sulfide, uses and miscellaneous 53201-92-6

121797-58-8, Europium magnesium strontium silicate (Eu_{0.03}MgSr_{2.97}(SiO₄)₂)

130430-59-0, Europium potassium strontium phosphate (Eu_{0.05}KSr_{0.95}(PO₄))

130430-60-3, Europium potassium strontium phosphate (Eu_{0.03}KSr_{0.97}(PO₄))

130430-61-4 130430-62-5 130430-63-6 130430-64-7

139430-65-8 130459-24-4

RL: USES (Uses)

(blue phosphor blend containing, for projection TV tube)

L21 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:128850 HCAPLUS Full-text

DOCUMENT NUMBER: 112:128850

ORIGINAL REFERENCE NO.: 112:21637a,21640a

TITLE: Europium-activated alkaline earth zinc silicate phosphor

INVENTOR(S): Suzuki, Teruki; Yamada, Takamichi; Matsukyo, Hideji; Yamamoto, Akira

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01167394	A	19890703	JP 1987-323998	19871223 <--
PRIORITY APPLN. INFO.:			JP 1987-323998	19871223 <--

AB The phosphor comprises (M₃Mg)1-xZnxSi₂O₈ (M = Sr, Ca, and/or Ba; 2 + 10-5 ≤ x ≤ 1 + 10-2) activated by Eu²⁺. The phosphor is useful for a cathode-ray tube in a projector or tricolor fluorescent lamp. {(Sr_{2.97}Eu_{0.03})Mg}1-xZnxSi₂O₈ (x = 2 + 10-5) showed fluorescence at 458 nm with high efficiency.

IT 124698-06-2

RL: PRP (Properties)

(europium-activated, phosphor, for fluorescent lamp or cathode-ray tube)

RN 124698-06-2 HCAPLUS

CN Calcium europium magnesium strontium silicate
(Ca_{0.08}Eu_{0.03}MgSr_{2.92}(SiO₄)₂) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.08	7440-70-2
Eu	0.03	7440-53-1
Sr	2.92	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-59

ICS H01J029-20

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 121797-58-8, Europium magnesium strontium silicate (Eu_{0.03}MgSr_{2.97}(SiO₄)₂)

124698-04-0, Barium europium magnesium silicate (Ba_{2.98}Eu_{0.02}Mg(SiO₄)₂)

124698-05-1, Calcium europium magnesium silicate (Ca_{2.98}Eu_{0.02}Mg(SiO₄)₂)

124698-06-2 124698-07-3 125750-28-9

RL: PRP (Properties)

(europium-activated, phosphor, for fluorescent lamp or cathode-ray tube)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L21 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1989:467604 HCAPLUS Full-text

DOCUMENT NUMBER: 111:67604

ORIGINAL REFERENCE NO.: 111:11247a,11250a

TITLE: Manufacture of alkaline earth-magnesium silicate
blue-emitting phosphorINVENTOR(S): Suzuki, Teruki; Yamada, Takamichi; Matsukyo, Hideji;
Yamamoto, Akira

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01006087	A	19890110	JP 1987-161335	19870630 <--
PRIORITY APPLN. INFO.:			JP 1987-161335	19870630 <--

AB A process for manufacturing a blue-emitting phosphor, M3MgSi2O3: Eu2+ (M = ≥1 selected from Ca, Sr, and Ba), comprises subjecting raw material consisting of M-containing compds., Mg-containing compd(s), and SiO2 to reaction in the presence of a halide of Eu, and Br and/or I-containing compd(s) as flux, followed by refining, as required, the product in the presence of compds. selected from Na2SO4, K2SO4, and Rb2SO4.

IT 121797-57-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(phosphor, blue-emitting, manufacture of)

RN 121797-57-7 HCAPLUS

CN Calcium europium magnesium strontium silicate (Ca0.6Eu0.03MgSr2.37(SiO4)2)
(CA INDEX NAME)

Component	Ratio	Component Registry Number
O4Si	2	17181-37-2
Ca	0.6	7440-70-2
Eu	0.03	7440-53-1
Sr	2.37	7440-24-6
Mg	1	7439-95-4

IC ICM C09K011-59

ICS H01J029-20; H01J061-44

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 121797-56-6P 121797-57-7P 121797-58-8P, Europium magnesium
strontium silicate (Eu0.03MgSr2.97(SiO4)2)RL: IMF (Industrial manufacture); PREP (Preparation)
(phosphor, blue-emitting, manufacture of)OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

=> d his nof

(FILE 'HOME' ENTERED AT 10:32:14 ON 31 JUL 2009)

FILE 'LREGISTRY' ENTERED AT 10:32:23 ON 31 JUL 2009

L1 0 SEA ABB=ON PLU=ON (CA(L)SR(L)EU(L)MG(L)SI(L)O)/ELS
 L2 15 SEA ABB=ON PLU=ON 0.1-0.4/CA
 L3 15 SEA ABB=ON PLU=ON 0.1<=CA<=0.4
 L4 13 SEA ABB=ON PLU=ON 0<CA<0.1

FILE 'REGISTRY' ENTERED AT 10:41:05 ON 31 JUL 2009

L5 173 SEA ABB=ON PLU=ON (CA(L)SR(L)EU(L)MG(L)SI(L)O)/ELS
 L6 50 SEA ABB=ON PLU=ON L5 (L) 6/ELC.SUB
 L7 18854 SEA ABB=ON PLU=ON 0.1<=CA<=0.4
 L8 9464 SEA ABB=ON PLU=ON 0<CA<0.1
 L9 26079 SEA ABB=ON PLU=ON L7 OR L8
 L10 18121 SEA ABB=ON PLU=ON 0.1<=SR<=0.4
 L11 5618 SEA ABB=ON PLU=ON 0<EU<0.1
 L12 13 SEA ABB=ON PLU=ON L6 AND L9
 L13 1 SEA ABB=ON PLU=ON L12 AND L10
 L14 1 SEA ABB=ON PLU=ON L13 AND L11
 D SCAN

FILE 'HCAPLUS' ENTERED AT 10:44:21 ON 31 JUL 2009

L15 1 SEA ABB=ON PLU=ON L14
 D SCAN TI
 D IALL
 L16 1 SEA ABB=ON PLU=ON L13
 L17 1 SEA ABB=ON PLU=ON L15 OR L16
 D SCAN TI
 L18 10 SEA ABB=ON PLU=ON L12
 L19 35 SEA ABB=ON PLU=ON L6
 L20 35 SEA ABB=ON PLU=ON L17 OR L18 OR L19
 L21 11 SEA ABB=ON PLU=ON L20 AND (AY<2003 OR PY<2003 OR PRY<2003)
 L22 1 SEA ABB=ON PLU=ON US20060150865/PN
 SAVE TEMP L21 JOH378HCAP/A
 D QUE L21
 D L21 1-11 IBIB ABS HITSTR HITIND